## AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. through 23.    (Canceled)

24.    (Previously Presented) A method of sensing targets from a host vehicle, comprising:

capturing images in the host vehicle and detecting lane boundaries in the captured images;

estimating a projected path for the host vehicle;

detecting, on the host vehicle, the position and distance from the host vehicle of a target vehicle located on the road ahead of the host vehicle;

determining a target lane in which the host vehicle will be located when it has travelled along the projected path by the distance from the host vehicle to the target vehicle; and

comparing the position of the target vehicle with the position of the target lane to provide a processed estimate of the actual position of the target vehicle.

25.    (Previously Presented) The method of Claim 1 in which the processed estimate comprises an indicator of whether or not the target vehicle is in the same lane that the host vehicle is projected to be in when the host vehicle has travelled along the projected path by the distance to the target vehicle.

26.    (Previously Presented) The method of Claim 1, in which the step of capturing images comprises capturing a plurality of two-dimensional images of an area of road ahead of the host vehicle using a video camera.

27.    (Previously Presented) The method of Claim 1 in which the step of detecting lane boundaries in the captured images comprises filtering the images to identify artefacts in the images corresponding to at least one of the right hand edge of a road, the left hand edge of the road, lane markings defining lanes in the road, the radius of curvature of the lanes and the road, and the heading angles of the host vehicle relative to the road and lanes.

28.    (Previously Presented) The method of Claim 4 in which the step of detecting lane boundaries comprises applying an edge detection algorithm to the images to detect lines or curves that correspond to lane boundaries.

29.    (Previously Presented) The method of claim 5, in which the step of detecting lane boundaries comprises performing a tracking algorithm which employs a recursive least squares technique to identify the path of lanes in the images.

30.    (Previously Presented) The method of claim 1, in which the step of determining the target lane comprises projecting the path estimated by the vehicle path estimation means by the distance to the target vehicle and comparing the part projected to that distance with lane boundary information at that distance.

31.    (Previously Presented) The method of claim 1, in which the step of estimating the projected path comprises projecting a path based upon the heading of the host vehicle.